

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/FR03/02512	International filing date (day/month/year) AUGUST 12, 2003	Priority date (day/month/year) AUGUST 14, 2002
International Patent Classification (IPC) or national classification and IPC B23K23/00		
Applicant RAILTECH INTERNATIONAL		

1.	This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2.	<p>This REPORT consists of a total of 6 sheets, including this cover sheet.</p> <p><input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of 3 sheets.</p>
3.	<p>This report contains indications relating to the following items:</p> <p>I <input checked="" type="checkbox"/> Basis of the report</p> <p>II <input type="checkbox"/> Priority</p> <p>III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p>IV <input type="checkbox"/> Lack of unity of invention</p> <p>V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement</p> <p>VI <input type="checkbox"/> Cited documents</p> <p>VII <input type="checkbox"/> Defects in the international application</p> <p>VIII <input type="checkbox"/> Observations on the international application</p>

Date of submission of the demand MARCH 12, 2004	Date of completion of this report NOVEMBER 12, 2004
Name and mailing address of the IPEA/EP European Patent Office P.B.5818 Patentlaan 2 NL-2280 HV Rijswijk - Netherlands Tel: +31 70 340-2040 Tx: 31 651 epo nl Fax: +31 70 340-3016	Authorized officer H. Jaeger  Telephone No. +31 70 340-4571

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**I. Basis of the report**

1. Concerning the elements of the International application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments (Rules 70.16 and 70.17).):*

**Description, pages:**

1-30 as initially filed

**Claims, No:**

1-11 received MARCH 15, 2004 with letter dated MARCH 12, 2004

**Drawings, sheets:**

1/2-2/2 as initially filed

2. With regard to **language**, all the elements indicated above were available to the Administration or were furnished thereto in the language in which the international application was filed, except when specified to the contrary under this point.

The elements were available to the Administration or were furnished thereto in the following language: , which is:

- ☐ the language of a translation furnished at the end of the international search (in accordance with Rule 23.1(b)).
- ☐ the publication language of the international application (in accordance with Rule 48.3(b)).
- ☐ the language of the translation furnished at the end of the International Preliminary Examination (in accordance with Rule 55.2 or 55.3).

3. With regard to **sequences of nucleotides or amino acids** disclosed in the International Application (where applicable), the International Preliminary Examination was carried out on the basis of the sequence listing:

- ☐ contained in written form in the International Application.
- ☐ filed in computer-readable form with the International Application.
- ☐ subsequently furnished in written form to the Administration.
- ☐ subsequently furnished in computer-readable form to the Administration.
- ☐ The declaration has been furnished, in which the sequence listing, that has been written and subsequently furnished, does not go beyond the disclosure made in the application as filed.
- ☐ The declaration has been furnished, in which the information recorded in computer-readable form is identical to that of the sequence listing presented in written form.

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4. The amendments have resulted in the cancellation of:

- ☐ the description,      pages  
☐ the claims,      Nos.  
☐ the drawings,      sheets/fig

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated below (Rule 70.2(c)):

*(Any replacement sheet including amendments of this nature must be indicated in point 1 and annexed to this report)*

6. Additional observations, if necessary:

**V. Reasoned declaration under Article 35(2) concerning novelty, inventive step, and susceptibility of industrial application; citations and explanations supporting such declaration**

## 1. Statement

Novelty

YES: Claims 5-9, 11

NO: Claims 1-4, 10

Inventive step

YES: Claims 8

NO: Claims 1-7, 9-11

Susceptibility of industrial application

YES: Claims 1-11

NO: Claims

## 2. Citations and explanations

see separate sheet

**Concerning point V**

**Reasoned declaration concerning novelty, inventive step, and susceptibility of industrial application; citations and explanations in support of this declaration**

Reference is made to the following documents:

- D1: DE 198 22 851 A
- D2: EP 0 407 240 A (cited in the application)
- D3: DE 196 35 173 C

**V.1 Absence of novelty**

**V.1.1 Claim 1**

The present application does not satisfy the conditions set out in PCT Article 33(1), since the subject matter of claim 1 does not comply with the novelty criterion defined by PCT Article 33(2).

Document **D1** describes the following (the references in parentheses apply to that document):

- a cover (14) for closing a top opening (11a) of internally defined dimensions of a thermite reaction chamber of a crucible (2), the cover having for this purpose an outer bottom peripheral edge (an outer annular portion of the cover) suitable for bearing on a top peripheral edge (11) defining said top opening;
- said cover (14) being substantially continuous and secured via said bottom edge to a substantially continuous annular filter lining (14a) suitable for constituting a substantially continuous contact medium between said bottom edge and said top edge (11); and
- said cover (14) has sufficient weight to withstand solely under gravity any gas pressure that might be developed in said chamber during a thermite reaction (since D1 discloses no cover fastener means, e.g. clamps, the characteristics of fastening by means of its own weight are disclosed implicitly).

**V.1.2 Claims 2 to 4, 10**

Document **D1** also describes all of the characteristics of these claims (filter linings are typically compressible, and thus implicitly disclosed).

## **V.2 Absence of inventive step**

Dependent claims 5-7, 9 and 11 do not contain any characteristic which, in combination with the characteristic of any of the claims from which they depend, could define subject matter satisfying the requirements of the PCT concerning inventive step.

Claims 5, 6: the rim of the cover is a construction that is alternative to the construction proposed by D1 (holes 11a) for protecting the filter lining from particles projected as a result of the thermite reaction. The characteristics of clearance between the filter lining and such a rim are obvious (see D1) in order to allow the gaseous products of the reaction to pass through the filter lining.

Claims 7, 9: the construction of a cover in the form of a pot and of a cover having centering means are known from D2. Consequently, these claims stem in obvious manner from the disclosure of D1 and D2.

Claim 11: the use of sand agglomerated by means of a binder comes within the state of the art (see for example D3).

**V.3** The combination of characteristics in claim 8 does not come within the state of the art and does not stem therefrom in obvious manner for the following reasons.

The subject matter of claim 8 differs in that the filter lining has annular clearance between the rim and the filter lining, and in that the bottom edge of the cover presents blind cavities that are circumferentially localized and that are circumferentially distributed, thereby leading to a larger filter area towards the inside since the vertical dimension of the filter plus a fraction of its circumferential dimension are exposed towards the thermite reaction chamber.

The subject matter of claim 8 is therefore novel (PCT Article 33(2)).

The problem the present invention seeks to solve can thus be considered as being that of improving dust filtering. The solution to the problem proposed in claim 8 of the present application is considered as implying an inventive step (PCT Article 33(3))

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since this solution does not stem in obvious manner from the state of the art.